CLAIMS:

1. A method of communicating in an ad hoc polling based communication infrastructure, the method comprising steps of:

participating by a PMP node in a first piconet to exchange data with a first node within a first payload window associated with a first rendezvous point;

defining a second payload window associated with a second rendezvous point for the PMP node;

switching the PMP node to a second piconet to exchange data with a second node within the second payload window; and

determining by the first node, in response to the PMP node missing the second rendezvous point, said PMP node switching to the second piconet.

2. The method of claim 1, further comprising a step of:

determining by the second node, in response to the PMP node being present at the second rendezvous point, said PMP node switching to the second piconet.

3. The method of claim 1, wherein the first node is a first master node, the second node is a second master node, and the PMP node is a slave node of the first master node and the second master node.

4. The method of claim 1, wherein the first node is a slave node, the PMP node is a first master node, and the second node is a second master node.

5. The method of claim 1, further comprising a step of:

making peer nodes aware of rendezvous points associated with the PMP node, said peer nodes comprising the first node, and said rendezvous points comprising the second rendezvous point.

6. The method of claim 1, wherein the rendezvous points are based upon a unique identifying address of the PMP node.

7. The method of claim 1, further comprising a step of:

generating pseudo random rendezvous points comprising the first and second rendezvous points.

8. The method of claim 7, wherein said step of generating pseudo random rendezvous points further comprises:

using Galois fields to generate said pseudo random rendezvous points.

9. The method of claim 7, wherein said step of generating pseudo random rendezvous points further comprises:

using a frequency hopping sequence selection algorithm to generate said pseudo random rendezvous points.

10. The method of claim 1, wherein said frequency hopping sequence is a Bluetooth frequency hopping sequence.

11. The method of claim 1, wherein said second rendezvous point is within said second payload window.

12. The method of claim 1, wherein said second rendezvous point is a predetermined number of frames prior to said second payload window.

13. The method of claim 1, further comprising a step of:

setting up a long-term schedule for of rendezvous points.

14. The method of claim 1, further comprising a step of:

setting up a next rendezvous point during a window in which the PMP node is present.

15. The method of claim 1, further comprising a step of:

designating a fallback window for the PMP node in case an effort to switch to another piconet fails;

wherein said fallback window is associated with a piconet in which the PMP node was present before the failed switch.

16. The method of claim 1, further comprising a step of:

providing scheduling information from an interpiconet scheduler to an intrapiconet scheduler, said scheduling information comprising scheduled slave node presence or absence in the first piconet and in the second piconet.

17. The method of claim 1, wherein the ad hoc polling based communication infrastructure is a Bluetooth system.

18. A method of communicating in an ad hoc polling based communication infrastructure, the method comprising steps of:

defining rendezvous points for a slave node based upon information specific to the slave node, wherein the slave node simultaneously belongs to a first piconet and to a second piconet;

associating the rendezvous points with payload windows of the slave node, there being an associated payload window for each rendezvous point;

monitoring the rendezvous points by a first master node of the first piconet to determine the slave node's first piconet presence for each of the associated payload windows; and

monitoring the rendezvous points by a second master node of the second piconet to determine the slave node's second piconet presence for each of the associated payload windows.

19. A method of communicating in an ad hoc polling based communication infrastructure, the method comprising steps of:

defining rendezvous points for a slave node based upon information specific to the slave node, wherein the slave node belongs to a first piconet;

associating the rendezvous points with payload windows of the slave node, there being an associated payload window for each rendezvous point of the slave node; and

monitoring the rendezvous points by a first master node of the first piconet to determine the slave node's first piconet presence for each of the associated payload windows;

wherein said rendezvous points are for all piconets to which the slave node belongs, the first piconet being one of said all piconets.

20. The method of claim 19, wherein the slave node is a PMP node.

21. An ad hoc polling based communication system comprising:

a first piconet;

a first node within the first piconet;

a PMP node within the first piconet, the PMP node being in communication with the first node, the PMP node having a first rendezvous point associated with a first payload window and a second rendezvous point associated with a second payload window;

a second piconet;

a second node within the second piconet;

a memory for storing information accessible to the first node, said information being associated with switching of the PMP node to the second piconet, and said information being stored in response to the rendezvous point.

22. The system of claim 21, wherein the first node is a first master node, the second node is a second master node, and the PMP node is a slave node of the first master node and the second master node.

23. The system of claim 22, wherein the first node is a slave node, the PMP node is a first master node, and the second node is a second master node.